(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 27 January 2005 (27.01.2005)

PCT

(10) International Publication Number WO 2005/007770 A1

(51) International Patent Classification⁷: C09G 1/02, H01L 21/321

C09K 3/14,

(21) International Application Number:

PCT/US2004/021998

(22) International Filing Date:

9 July 2004 (09.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/486,686

11 July 2003 (11.07.2003) US

- (71) Applicant (for all designated States except US): W.R. GRACE & CO.-CONN. [US/US]; 7500 GRACE DRIVE, COLUMBIA, Maryland 21044-4098 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CHU, Jia-Ni [US/US]; 210 Medford Road, Wilmington, Delaware 19803 (US). PRYOR, James Neil [US/US]; 3253 Danmark Drive, West Friendship, Maryland 21794 (US).
- (74) Agent: BUNCH, William, Dale; W. R. Grace & Co-CONN., 7500 Grace DRive, Columbia, MD 21044 (US).

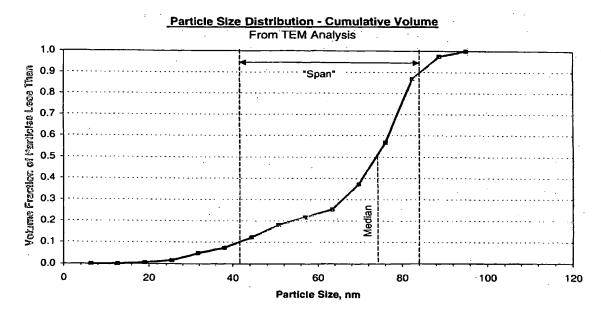
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ABRASIVE PARTICLES FOR CHEMICAL MECHANICAL POLISHING



(57) Abstract: An abrasive composition for polishing substrates including a plurality of abrasive particles having a polydisperse particle size distribution with median particle size, by volume, being about 20 nanometers to about 100 nanometers; a span value, by volume, being greater than or equal to about 20 nanometers, wherein the fraction of particles greater than about 100 nanometers is less than or equal to about 20% by volume of the abrasive particles.